

# Work Order ID 84676

May-30-12 3:48:33 PM

Item ID: D350-748-241TRN

Revision ID:

Item Name: Crosstube Turning Detail

Start Date: 17/05/2012 Start Qty: 1.00

Required Date: 22/05/2012 Req'd Qty: 1.00

Reference:

Approvals: Process Plan:

Date:

Tooling:

QC:

Date:

SPC (Y/N):

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

120

\*120\*

Mori Seiki

Mori Seiki CNC Lathe Large

MORI SEIKI CNC LATHE LARGE

Memo

1-Turn second side as per Folio FA647  
2- File transition lines smooth.  
3-Scribe part # as per Dwg D350-748-241  
FOLIO REV:         
DWG REV: F

130

\*130\*

QC

Quality Control

QC1- Inspect dimensions to dimension sheet

Memo

140

\*140\*

QC

Quality Control

QC8- Inspect parts - second check

Memo

\*84

Accept

# Work Order ID 84676

May-30-12 3:48:32 PM

Item ID: D350-748-241TRN

Revision ID:

Item Name: Crosstube Turning Detail

Start Date: 17/05/2012 Start Qty: 1.00

Required Date: 22/05/2012 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan: *MLJ*

Date: *12/05/31*

QC:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw Nbr

Revision Nbr

D350-748-241

F

100

\*100\*

Mori Seiki

Mori Seiki CNC Lathe Large

MORI SEIKI CNC LATHE LARGE

Memo

1-Fill tube with sand & install plugs on both ends as per Folio FA647  
2-Turn first side as per Folio FA647  
3- File transition lines smooth.  
FOLIO REV:         
DWG REV: F

110

\*110\*

QC

Quality Control

QC1- Inspect dimensions to dimension sheet

Memo

0.00

0.00

\*84676\*

\*N9000040100\*

Setup Start

\*NS1\*

Stop

\*NS2\*

Cust Item ID:

Customer:

Run Start

\*NR1\*

Stop

\*NR2\*

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

*1 φ KC 12-6-10*

*1 φ KC 12-6-10*

Dart Aerospace Ltd

W/O:		WORK ORDER
DATE	STEP	PROCEDURE CHANGE

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_  
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)		
DATE	STEP	Description of NC Section A	Corrective Action	
			Initial Chief Eng	Approval QC Inspector

NOTE: Date & initial all entries

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Work Order ID 84676

May-30-12 3:48:33 PM

**\*84676\***

Page 3

Item ID: D350-748-241 TRN

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Crosstube Turning Detail

Stop **\*NS2\***

Start Date: 17/05/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 22/05/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

0.00

**\*150\***

Large Fab

Crosstubes

Memo

0.00

Crosstubes

1-DRILL HOLES FOR HEAT TREAT USING DT9806(HOLES MUST BE  
ALIGNED ON SAME LINE ON BOTH CUFFS)

- DC 12/07/24

2-Grind machining marks

Rm 12-7-27

160

Outsource process - Heat Treat

0.00

**\*160\***

Outsource1

Memo

0.00

Outsource process - Heat Treat

Issue P/O:

Heat Treat to min 180 KSI As per Dwg D350-748-241  
Sand Blast tube after Heat Treat  
Possible Supplier: Vac Aero  
Ensure Certificate of Conformity is attached

17535

1207-27

DD

170

Receive & Inspect for Damage & Mat'l Certs

0.00

**\*170\***

Packaging

Memo

0.00

Packaging

Ensure certificate of conformaty is attached

1x  
424/24

50  
12-8-21

W/O: 84676		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		See link 12-19/14					

Part No: D350-748-241 TRN PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: Aut Date: 12/10/14  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: OK Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/09/14	1100	Supplier did not standardize our PO 17555	W 12/09/14	Send for standard to remove scale only Jesse PD 17978 IMI	W 12/10/14	DAS 16 17/10/15	W 12/09/14	DAS 16 12/10/15
		RC: Poor Communication		Review + Impact	W 12/19/14	①		

NOTE: Date & initial all entries

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 84676
<b>Description:</b> Crosstube Assembly (AS350/355 High Aft)	<b>Part Number:</b> D350-748-241
<b>Inspection Dwg:</b> D350-748-241 <b>Rev:</b> F	<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.242	✓	VERN	CNC-08
	2.180	+0.005/-0.000	2.183	✓		
	2.180	+0.005/-0.000	2.183	✓		
	2.208	+0.005/-0.000	2.212	✓		
	2.234	+0.005/-0.000	2.238	✓		
	2.253	+0.005/-0.000	2.258	✓		
	2.272	+0.005/-0.000	2.277	✓		
	2.299	+0.005/-0.000	2.304	✓		
	0.063	+/-0.010	.063	✓	RG	
	4.26	+/-0.030	4.26	✓	VERN	CNC 08
	R0.063	+/-0.010	.063	✓	RG	
	R0.50	+/-0.030	.50	✓	RG	
	2.240	+0.005/-0.000	2.245	✓	VERN	CNC-08
	2.180	+0.005/-0.000	2.185	✓		
SIDE B	2.180	+0.005/-0.000	2.185	✓		
	2.208	+0.005/-0.000	2.213	✓		
	2.234	+0.005/-0.000	2.239	✓		
	2.253	+0.005/-0.000	2.258	✓		
	2.272	+0.005/-0.000	2.277	✓		
	2.299	+0.005/-0.000	2.304	✓		
	0.063	+/-0.010	.063	✓	RG	
	4.26	+/-0.030	4.26	✓	VERN	CNC-08
	R0.063	+/-0.010	.063	✓	RG	
	R0.50	+/-0.030	2.304	✓	RG	
	122.70	+/-0.060	122.700	✓	type	LG-15

<b>Measured by:</b> JML/KC	<b>Audited by:</b> DP	<b>Preliminary Approval:</b>
<b>Date:</b> 12/06/08	<b>Date:</b> 12-6-11	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue (P/O D350-748-201)	KJ/JLM	
B	12.02.02	Dwg Rev updated	KJ	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

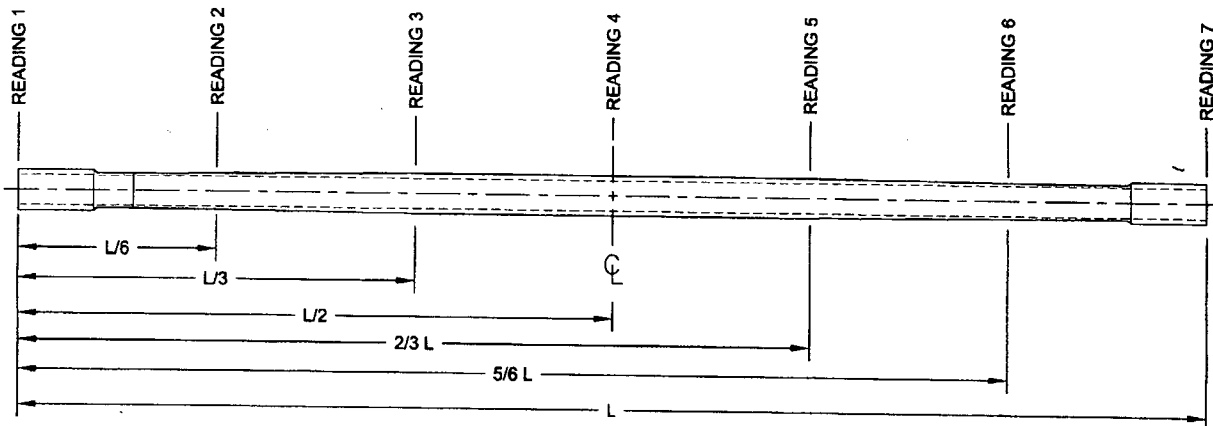
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RT AEROSPACE LTD		Work Order:	24676
Description: Crosstube Assembly (AS350/355 High Aft)		Part Number:	D350-748-241
Inspection Dwg: D350-748-241 Rev: F		Page 2 of 2	

### WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation $\Delta w$ (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L= 0"	.129	.129	.137	.138	.009	0.030"
READING 2 L= 14	.107	.105	.104	.108	.004	
READING 3 L= 28	.137	.130	.135	.143	.013	
READING 4 L= 61	.161	.160	.158	.159	.003	
READING 5 L= 28	.140	.136	.131	.132	.005	
READING 6 L= 14	.109	.103	.110	.103	.017	
READING 7 L= cuff	.123	.128	.130	.125	.007	

#### Calibration Result

Actual Block Thickness: \_\_\_\_\_

Sitiescan 250 Measured Thickness: \_\_\_\_\_

Measured by:	mm.c
Date:	12/07/11

Audited by:	
Date:	12-6-11

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
A	07.01.17	New Issue (P/O D350-748-201)	KJ/JLM	
B	12.02.02	Dwg Rev updated	KJ	
C	12.06.04	Wall thickness form added	KJ	

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
<b>Root Cause</b>	<b>Date</b>	<b>Step</b>	<b>Qty</b>	<b>Description of work order update or Non-conformance</b>	<b>Initial Chief Eng</b>	<b>Action Description</b>	<b>Sign &amp; Date</b>	<b>Verification</b>	<b>QC Inspector</b>		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other



Item	Qty -241	Part Number	Description
1	X	D350-748-241	CROSSTUBE ASSEMBLY (AS 350/355 HI AFT)
2	1	D6015-125	CROSSTUBE (OR D6018-125)
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
8	1	MS27039-1-10	SCREW

# **GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6015-125 OR D6018-125  
FINISHED LENGTH = 122.700±0.06
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2  
CADIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-241" AND BATCH NUMBER ON INSIDE OF CUFF  
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 29.85 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT ALL EDGES FROM MACHINING  
LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER  
BENDING.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO  
BENDING IS 6% BASED ON O.D.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING. ACCEPTABLE TO  
VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.
- 12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE,  
CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES,  
NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY.  
CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE  
MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO  
CRACKING/CHIPPING/GROOVES.
- 14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT  
NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- 15) MAX TWIST AFTER BENDING: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN  
CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.25 (ZN C1-3).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 84676 MWJ  
12/05/31

**RELEASED**  
2011-01-08  
MM

F	ADD HRC TEST OPTION (88-1) PER PAR 08-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4)	CP	10.11.23
E	REVISE GENERAL NOTES: UPDATE TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A8-3); ADD TOLERANCES (ZN C6-3, D2-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6018-125 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	DP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	DP		
CHECKED	DP	DRAWING NO.	REV. F
MFG. APPR.	DP	D350-748-241	SHEET 1 OF 4
APPROVED	DP	TITLE	SCALE
DE APPR.	DP	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	10.11.23	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

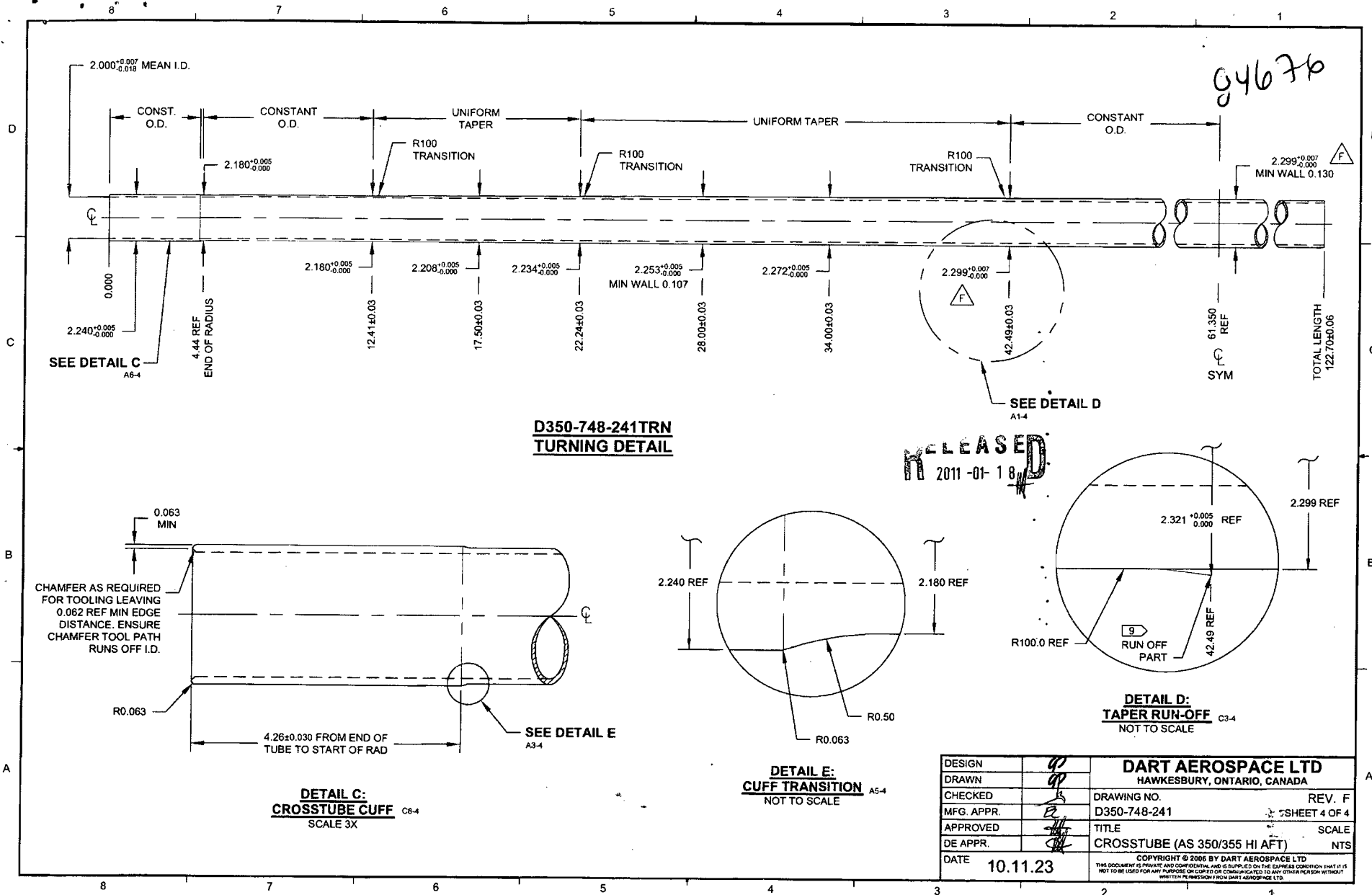
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



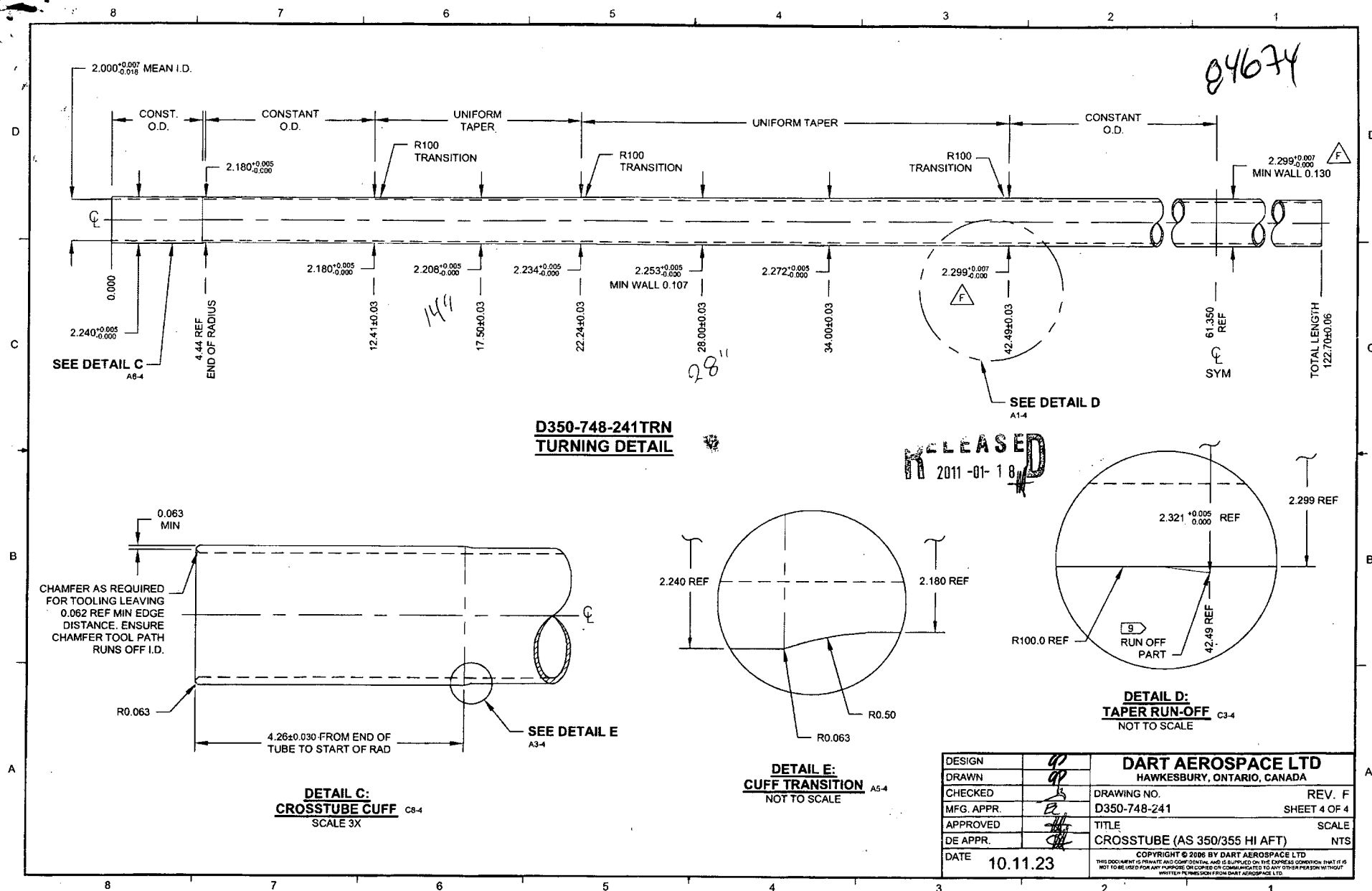
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

May-30-12 3:48:36 PM

Page 1

Work Order ID: 84676

\*84676\*

Parent Item: D350-748-241TRN

\*D350-748-241TRN\*

Parent Item Name: Crosstube Turning Detail

Start Date: 17/05/2012

Required Date: 22/05/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 08-03-06 DD verified by:ec  
IPP Rev B Removed polish 08.04.02 EC verified by: DD  
IPP Rev C Removed LPS-3 08.06.23 Ec verified by: DD IPP Rev D  
11.02.24 as per dwg rev.F DD verf: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6015-125		Manufactured	No			120	Each	38.0000	1	1			

\*D6015-125\*

Crosstube Material

\*\*

Location

Loc Qty

Loc Code

HALL

38

61380

4

72511

34

— 1 — 2mm.L 12/06/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order ID 84676

May-30-12 3:48:33 PM

**\*84676\***

Page 4

Item ID: D350-748-241TRN

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Crosstube Turning Detail

Start Date: 17/05/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 22/05/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180

QC6- Inspect dimensions to drawing

0.00

**\*180\***

QC

Memo

0.00

Quality Control

*DAS 16 12/10/15*

190

Packaging

0.00

**\*190\***

Packaging

Memo

0.00

Packaging

Identify and stock in kanban rack  
Location: LG

*RM 12-7-28*

200

QC21- Final Inspection - Work Order Release

0.00

**\*200\***

QC

Memo

0.00

Quality Control

*12/10/15*

*12-10-15*

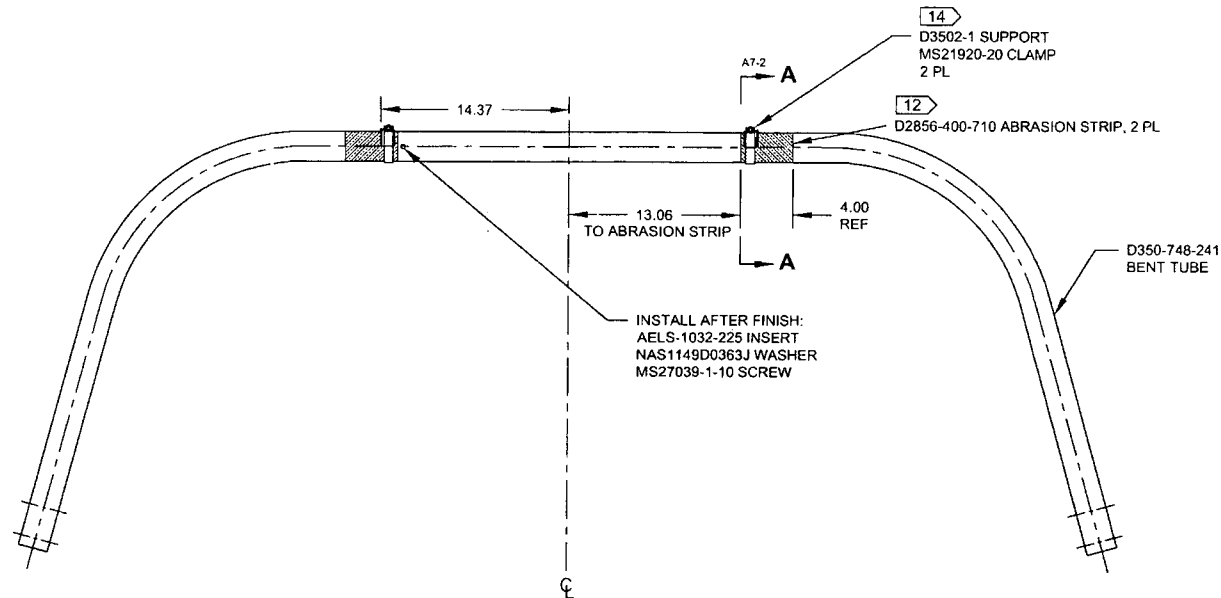
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

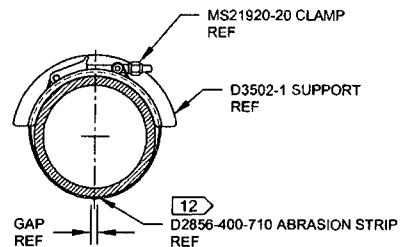
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D350-748-241  
ASSEMBLY DETAIL**



**SECTION A-A** D4-2  
SCALE 4X

**RELEASED**  
2011-05-19

DESIGN	9P	<b>DART AEROSPACE LTD</b>	
DRAWN	9P	HAWKESBURY, ONTARIO, CANADA	
CHECKED	13	DRAWING NO.	REV. F
MFG. APPR.	13	D350-748-241	SHEET 2 OF 4
APPROVED	13	TITLE	SCALE
DE APPR.	13	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	10.11.23	COPYRIGHT © 2006 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**METLAB**  
**1000 E. MERMAID LANE**  
**WYNDMOOR, PA 19038**

**Packing I**  
Sales Order No.

Sales Order  
Aug 1,

Voice: 215-233-2600  
Fax: 215-233-5653

Sold To:  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Ship To:  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Customer ID	PO Number	Payment Terms
DARA	PO17555	Net 30 Days
Ship Via	Process	
R & L CARRIER	HT	

Quantity	Item	Description	Total Shipped	This Shipr
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		

COMMENTS

SHIPPED BY, SIGNATURE  
METLAB

DATE

RECEIVED BY, SIGNATURE  
DART AEROSPACE

DATE

**METLAB**  
**1000 E. MERMAID LANE**  
**WYNDMOOR, PA 19038**

**Packing I**

Sales Order Nu

7

Sales Order

Aug 1,

Voice: 215-233-2600  
Fax: 215-233-5653

Sold To:  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Ship To:  
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Customer ID	PO Number	Payment Terms
DARA	PO17555	Net 30 Days
	Ship Via	Process
	R & L CARRIER	

Quantity	Item	Description	Total Shipped	This Shipn
1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		
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1.00	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT		

COMMENTS

SHIPPED BY, SIGNATURE  
METLAB

DATE

RECEIVED BY, SIGNATURE  
DART AEROSPACE

DATE







1000 E. Mermaid La., Wyndmoor (Phila.) PA 19038-8093  
Tel. (215) 233-2600 Fax (215) 233-5653

# Invoice

Invoice Num

0114

Invoice D

Aug 16, 20

Sold To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Ship To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Customer ID		Customer PO	Payment Terms	
DARA		PO17555	Net 30 Days	
Shop Order No.		Shipping Method	Ship Date	Due Date
73276		R & L CARRIER	8/16/12	9/15/12
Quantity	Item	Description	Unit Price	Extensi
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20
1	EACH	D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-IC) SANDBLAST AFTER HT	205.000	20

ANY DISCREPANCIES MUST BE REPORTED WITHIN 10 DAYS AFTER RECEIPT.

**We accept AMEX, Visa & Master Card**



Heat Treating and Metallurgical Consulting

Subtotal	Conti
Shipping/Handling	
Total Invoice Amount	Conti
Payment Received	
<b>TOTAL</b>	Conti

Visit our Web Site: <[www.thomasregister.com/metlab/](http://www.thomasregister.com/metlab/)>



1000 E. Mermaid Ln., Wyndmoor (Phila.) PA 19038-8093  
Tel. (215) 233-2600 Fax (215) 233-5653

# Invoice

Invoice

Int:  
Aug

Sold To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Ship To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7

Customer ID		Customer PO	Payment Terms
DARA		PO17555	Net 30 Days
Shop Order No.		Shipping Method	Ship Date
73276		R & L CARRIER	8/16/12
Quantity	Item	Description	Unit Price
1	EACH	OR AMS 2759-IC) SANDBLAST AFTER HT D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736	205.000
1	EACH	OR AMS 2759-IC) SANDBLAST AFTER HT D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736	205.000
1	EACH	OR AMS 2759-IC) SANDBLAST AFTER HT D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736	205.000
1	EACH	OR AMS 2759-IC) SANDBLAST AFTER HT D350-748-241TRN HEAT TREAT TO MIN 180 KSI (MIL-T-6736	205.000
		250 POUNDS TOTAL	

ANY DISCREPANCIES MUST BE REPORTED WITHIN 10 DAYS AFTER RECEIPT.

**We accept AMEX, Visa & Master Card**



Heat Treating and Metallurgical Consulting

Subtotal  
Shipping/Handling  
Total Invoice Amount  
Payment Received

**TOTAL**

Visit our Web Site: <[www.thomasregister.com/metlab/](http://www.thomasregister.com/metlab/)>

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Commercial Invoice:145

**Ship From:** Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Canada  
Tel # 1.613.632.5200  
GST # RT101272607

**Ship To: METLAB**  
1000 E Mermaid LN  
Wyndmoor  
PA, 19038 US

**ATTN: Mark Podob**  
**PH#** 215 233 2600

**Date:** 27-Jul-12 **P.O. # 17555**

**Ship Via:** Day & Ross PPD **FOB:Origin**

Item	Part Number / Product Description	Tariff Class.	Quantity	Unit Price	Total
1	Crosstube D350-748-241	8803.20	10	\$ 1,250.00	\$ 12,500.00
2					
3					
4					

*All Prices are in US Dollars*

*All of the above parts were made in Canada unless otherwise indicated*  
**THIS IS A CUSTOMS INVOICE ONLY**

Sub Total \$12,500.00

Total \$12,500.00

**Amount Due: \$12,500.00**

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Canada  
Tel.: 1.613.632.5200  
Fax: 1.613.632.1185  
GST # RT101272607



1000 E. Mermaid Ln., Wyndmoor (Phila.) PA 19038-8093  
Tel. (215) 233-2600 Fax (215) 233-5653

**ORDER ACKNOWLEDGEMENT**

E-MAILED TO: \_\_\_\_\_

FAXED TO: \_\_\_\_\_

613 632 1053

QF-4.7.2.2-01

Rev A.5/10/10

CUSTOMER: <i>Dart</i>	PO NUMBER: <i>P017555</i>
DATE MATERIAL RECEIVED: <i>8/1/2012</i>	METLAB QUOTE NUMBER: <i>N/A</i> Or, MINIMUM STD ORDER(CHECK) _____
ESTIMATED SHIP DATE: <i>8/15/12</i>	METLAB S.O. NUMBER: <i>173277</i>

THANK YOU FOR YOUR ORDER. WE WILL MAKE OUR BEST EFFORT TO SHIP YOUR ORDER ON OR BEFORE THE ESTIMATED SHIP DATE SHOWN ABOVE. IF YOU NEED TO CONTACT US REGARDING THIS ORDER, PLEASE REFERENCE THE METLAB S.O. NUMBER SHOWN ABOVE.

QUOTATION MISSING? ☒ OK TO PROCESS WITHOUT *PA*

PURCHASE ORDER MISSING? \_\_\_\_\_ OK TO START PROCESSING WITHOUT \_\_\_\_\_

NOTE THAT WE NEED THE FOLLOWING INFORMATION IN ORDER TO COMPLETE YOUR ORDER AND TO MEET THE PROMISED SHIP DATE:

TECHNICAL INFORMATION REQUIRED(LIST) : \_\_\_\_\_ ON HOLD : YES \_\_\_\_\_ NO \_\_\_\_\_

OTHER INFORMATION OR CLARIFICATION: \_\_\_\_\_ ON HOLD : YES \_\_\_\_\_ NO \_\_\_\_\_

RELEASED FOR PROCESSING BY: *PA* DATE: *8/8/12*

ACKNOWLEDGED BY: \_\_\_\_\_

TODAY'S DATE: \_\_\_\_\_

SHIPPED DATE: \_\_\_\_\_

THIS ORDER IS ACKNOWLEDGED WITH THE UNDERSTANDING THAT THE ABOVE PURCHASE ORDER IS IN ACCORDANCE WITH METLAB'S TERMS AND CONDITIONS OF SALE AS SUBMITTED AT THE TIME OF THE ABOVE QUOTATION.



# STRAIGHT BILL OF LADING - 1.866.DAY.ROSS

OTT 1983132 0



NIR R-500048-5

BILLER INIT. INITIALES PREPAREES A LA FACTURATION	OFF UNIT DÉCHARGE DU VÉHICULE NO.	NO. OF PIECES QUANTITÉ DE MORCEAUX
<b>DAY &amp; ROSS</b>	ON UNIT CHARGÉ DANS VÉHICULE NO.	NO. OF PIECES QUANTITÉ DE MORCEAUX

DATE MONTH DAY YEAR 07 27 12	LEVEL OF SERVICE <input type="checkbox"/> GENERAL	C.O.D. AMOUNT CURRENCY: <input type="checkbox"/> CDN <input type="checkbox"/> U.S.	<b>Pick Up Information</b> Telephone Number: Contact Name: Ready Date & Time: Closing Time:
<input type="checkbox"/> PRIVATE RESIDENCE PICK UP <input type="checkbox"/> PRIVATE RESIDENCE DELIVERY <input type="checkbox"/> PALLETS BEING RETURNED <input type="checkbox"/> HAZARDOUS GOODS* <input type="checkbox"/> APPOINTMENT DELIVERY (DATE/TIME)	<input type="checkbox"/> TAILGATE PICK UP <input type="checkbox"/> HEATED SERVICE <input type="checkbox"/> TRADE SHOW PU <input type="checkbox"/> INBOND	<input type="checkbox"/> TAILGATE DELIVERY <input type="checkbox"/> TEMPERATURE CONTROL (TL ONLY) <input type="checkbox"/> TRADE SHOW DELIVERY	
*this shipment contains dangerous goods as set out in the attached shipper's declaration			REQUESTED BY: <input type="checkbox"/> SHIPPER <input type="checkbox"/> CONSIGNEE <input type="checkbox"/> BILL TO <input type="checkbox"/> THIR EMAIL:

SHIPPER DAY & ROSS ACCT. NO. 038326 TEL NO. 6136325200 SHIPPER'S NAME PICK UP ADDRESS DART Aerospace 1270 Aberdeen ST HAWKESBURY ON K4A1K7 CITY PROV. COUNTRY POSTAL CODE	CONSIGNEE DAY & ROSS ACCT. NO. TEL NO. 215 233 CONSIGNEE'S NAME Mark Podob DELIVERY ADDRESS MetLab 1000 E. Mermaid Jan WYNDMOOR PA 1 CITY PROV. COUNTRY POSTAL CODE
---	---

METHOD OF PAYMENT <input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/> CASH IN ADVANCE AMOUNT CURRENCY: <input type="checkbox"/> CDN <input type="checkbox"/> THIRD PARTY BILL TO ACCOUNT NUMBER <input type="checkbox"/> VISA <input type="checkbox"/> M.C. <input type="checkbox"/> AMX EXPIRY DATE CARD NO.	OTHER BILL TO PARTICULARS BILL TO: BILL TO ADDRESS GST: CITY PROV. COUNTRY POSTAL CODE
--	--

SPOT QUOTE NO.	ROUTING OR SPECIAL INSTRUCTIONS	MAXIMUM LIABILITY OF \$2.00/LB OR \$4.41/KG COMPUTED ON THE TOTAL ACTUAL WEIGHT UNLESS DECLARED VALUATION STATES OTHERWISE. PLEASE SEE ADDITIONAL TERMS AND CONDITIONS ON REVERSE.		
NO. OF PCS.	DESCRIPTION OF ARTICLES AND SPECIAL MARKS	WEIGHT <input checked="" type="checkbox"/> LBS <input type="checkbox"/> KGS	DECLARED VALUE <input type="checkbox"/> CDN. <input type="checkbox"/> U.S.	DIMENSIONS
5	cardboard cartons	250		126x13x7
ALL USED HOUSEHOLD GOODS AND PERSONAL EFFECTS SHIPPED AT SHIPPER'S RISK OF DAMAGE				

The uniform TERMS OF CARRIAGE apply to this BILL OF LADING. (See Term and Condition No. 1)

NOTICE OF CLAIM must be submitted in writing within sixty (60) days of delivery. (See Term and Condition No. 2)

The carrier's maximum liability is limited by the TERM. CONDITIONS of the Bill of Lading. (See Term and Condition No. 5)

SHIPPER'S REF. NO.	PO 17555
SHIPPER'S SIGNATURE	Brigitte Alder
PRINT	BRIGITTE Golden

PICK-UP DATE	07-27-2012	NO. OF PCS.	
DAY & ROSS DRIVER	DENIS	PURCHASE ORDER	
POWER NO.	270604	TRAILER NO.	16

0111 JAN 1275



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO17555**

Purchase Order Date 7/27/2012

PO Print Date 7/27/2012

Page Number 1 of 3

**Order From :**

VU-MET001

METLAB  
1000 E. MERMAID LANE  
WYNDMOOR, PA 19038  
USA

**Contact Name**

**Vendor Phone**

215-233-2600

**Vendor Fax**

215-233-5653

**Vendor Account Nbr**

**Buyer**

Brigitte Golden

**Requisition Nbr**

**Tax Resale Nbr**

10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

Destination-Collect

**Ship To :**

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	84674	D350-748-241TRN	10:40:00 AM Yes	✓ 1.00	Day & Ross ppd	\$205.0000	\$205.0
		<b>Special Inst:</b>	HEAT TREAT TO MIN 180 KSI (MIL-T-6736 OR AMS 2759-1C) SAND BALST TUBE AFTER HEAT TREAT CERTIFICATIONS				
2	84667	D350-748-241TRN	10:40:00 AM Yes	✓ 1.00	Day & Ross ppd	\$205.0000	\$205.0
		<b>Special Inst:</b>	SAME AS ABOVE				
3	84670	D350-748-241TRN	10:40:00 AM Yes	✓ 1.00	Day & Ross ppd	\$205.0000	\$205.0
		<b>Special Inst:</b>	SAME AS ABOVE				
4	84676	D350-748-241TRN	10:40:00 AM Yes	✓ 1.00	Day & Ross ppd	\$205.0000	\$205.0
		<b>Special Inst:</b>	SAME AS ABOVE				

**PO Instructions:** CROSSTUBE WILL BE LEAVING THIS AFTERNOON WITH DAY&ROSS TRACKING # OTT19831320

No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required - YES NO

Change Nbr: 1

Change Date: 7/27/2012





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO17555**

Purchase Order Date 7/27/2012

PO Print Date 7/27/2012

Page Number 2 of 3

**Order From :**

VU-MET001

METLAB  
1000 E. MERMAID LANE  
WYNDMOOR, PA 19038  
USA

<b>Contact Name</b>		<b>Buyer</b>	Brigitte Golden
<b>Vendor Phone</b>	215-233-2600	<b>Requisition Nbr</b>	
<b>Vendor Fax</b>	215-233-5653	<b>Tax Resale Nbr</b>	10127-2607
<b>Vendor Account Nbr</b>		<b>Terms</b>	Net 30
		<b>Currency</b>	USD
		<b>FOB</b>	Destination-Collect

		<b>Special Inst:</b>	SAME AS ABOVE					
5	84659	D350-748-141TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					
		<b>Special Inst:</b>	SAME AS ABOVE					
6	86271	D350-748-141TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					
		<b>Special Inst:</b>	SAME AS ABOVE					
7	84666	D350-748-241TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					
		<b>Special Inst:</b>	SAME AS ABOVE					
8	84660	D350-748-141TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					
		<b>Special Inst:</b>	SAME AS ABOVE					
9	84675	D350-748-241TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					
		<b>Special Inst:</b>	SAME AS ABOVE					
10	86266	D350-748-141TRN	10:40:00 AM	1.00	Day & Ross ppd	\$205.0000	\$205.0	
			Yes					

**PO Instructions:** CROSSTUBE WILL BE LEAVING THIS AFTERNOON WITH DAY&ROSS TRACKING # OTT19831320

No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required - YES NO

Change Nbr: 1

Change Date: 7/27/2012



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO17555**

Purchase Order Date 7/27/2012

PO Print Date 7/27/2012

Page Number 3 of 3

**Order From :**

VU-MET001

METLAB  
1000 E. MERMAID LANE  
WYNDMOOR, PA 19038  
USA

<b>Contact Name</b>		<b>Buyer</b>	Brigitte Golden
<b>Vendor Phone</b>	215-233-2600	<b>Requisition Nbr</b>	
<b>Vendor Fax</b>	215-233-5653	<b>Tax Resale Nbr</b>	10127-2607
<b>Vendor Account Nbr</b>		<b>Terms</b>	Net 30
		<b>Currency</b>	USD
		<b>FOB</b>	Destination-Collect

**Special Inst:** SAME AS ABOVE

**PO Total:** \$2,050.0

**PO Instructions:** CROSSTUBE WILL BE LEAVING THIS AFTERNOON WITH DAY&ROSS TRACKING #  
OTT19831320

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required - YES NO

**Change Nbr:** 1

**Change Date:** 7/27/2012

## Brigitte Golden

---

**From:** Mark Podob <mpodob@metlabheattreat.com>  
**Sent:** Friday, July 27, 2012 11:21 AM  
**To:** Dan Krackovic; Doris Funches; Eugene Roberts  
**Cc:** Brigitte Golden  
**Subject:** FW: PO17555 from Dart  
**Attachments:** PO17555 METLAB.pdf

New P.O. from Dart Aerospace attached.  
Thanks.

Mark Podob  
Vice President, Marketing and Sales  
Metlab  
1000 E. Mermaid Lane  
Wyndmoor, PA 19038  
215-233-2600 Ext. 232  
(F) 215-233-5653  
[mpodob@metlabheattreat.com](mailto:mpodob@metlabheattreat.com)

This message and any attachments are intended for the individual or entity named above. If you are not the intended recipient, please do not forward, copy, print, use or disclose this communication to others; also please notify the sender replying to this message and then delete it from your system.

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**From:** Brigitte Golden [<mailto:bgolden@dartaero.com>]  
**Sent:** Friday, July 27, 2012 11:19 AM  
**To:** Mark Podob  
**Cc:** 'Linda Lacelle'  
**Subject:** PO17555 from Dart

Please find attached the PO  
Thank You

---

**From:** Linda Lacelle [<mailto:llacelle@dartaero.com>]  
**Sent:** Thursday, July 26, 2012 2:36 PM  
**To:** [mpodob@metlabheattreat.com](mailto:mpodob@metlabheattreat.com)  
**Cc:** Brigitte Golden  
**Subject:** more tubes

Hi Mark,  
We will be shipping out 9 tubes tomorrow for heat treat. Another batch should follow end of next week. As always, I need these asap..  
Thx!

Linda Lacelle  
Production manager  
Dart Aerospace

# DART Manufacturing Inc.

## Packing Slip

772 MAIN STREET E., P.O. BOX 3,  
HAWKESBURY, ONTARIO K6A 2R4

TEL: (613) 632-0921  
FAX: (613) 632-2681

Date Sep 24, 2012	Page 1
Shipment Number <b>SH005312</b>	

Sold To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
CANADA

Ship To:

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
CANADA

Reference No. 1000000000	PO Number 17979	Customer No. DAR100	Order No. OR005146	Ship Via	Order Date September 24, 2012
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Item Number	Description	Qty. Ordered	UOM	Qty. Shipped	Qty. Backord.
MS-1270	DART AEROSPACE - SANDBLAST 9 PIPES	9.00	EA	9.00	0.00

Comments:

Total weight:

Total packages:

\*\*\* THANK YOU FOR YOUR BUSINESS \*\*\*

